MONTANA UNDERGROUND STORAGE TANK PROGRAM NEWSLETTER

# MUST News

*Continential Divide East Glacier – photo courtesy of BigSkyFishing.com*

**Department of Environmental Quality** **Spring Issue 2008**

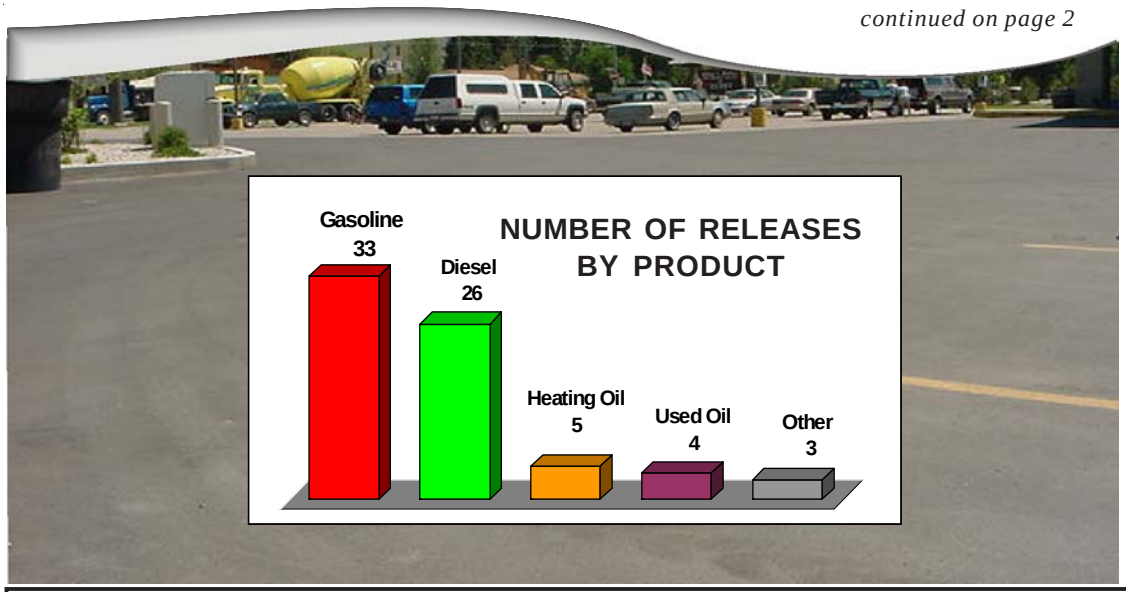
# RELEASE AUTOPSIES for 2007

Once again we are taking our annual look at the sources and causes of petroleum releases from the past year to try and identify trends that may help us prevent future releases. This article looks at the sixty-seven (67) petroleum releases from above-ground and underground storage tanks in Montana during 2007. For the last several years, the Department of Environmental Quality has received reports of between 50 and 70 new releases per year. The 2007 total falls within these statistics and this trend indicates that we may be seeing a similar annual total for several years to come.

**Gas and Diesel – Principle Product**

A look at the type of fuels also reveals nothing extraordinary. Gasoline and diesel top the list of products released, comprising 83% of the products reported. The remaining share comes from heating oil, used motor oil, and other products, such as new motor oil.

*continued on page 2*




## *Inside This Issue*

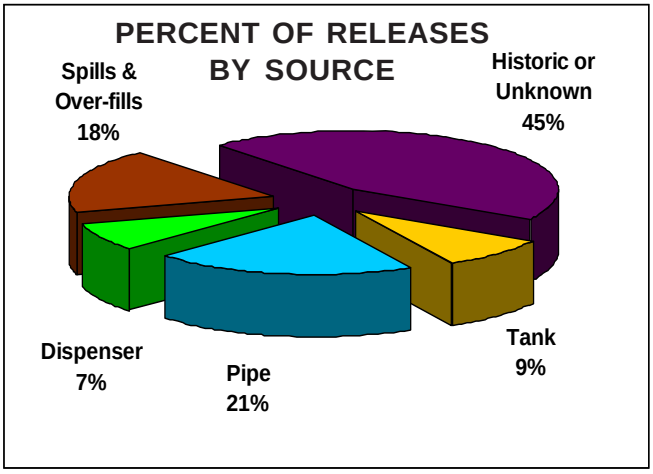


Montana Department of Environmental Quality

Underground Storage Tank Section
1520 East Sixth Avenue • Helena, MT 59620-0901
Phone: 406-444-5300 • Fax: 406-444-1374
E-mail: ustprogram@mt.gov • UST Web: www.deq.mt.gov/UST/index.asp
Petroleum Technical Section • Petroleum Tank Release Compensation Board
Leaking Underground Storage Tank (LUST)/Brownfields Section
1100 North Last Chance Gulch. • P. O. Box 200901 • Helena, MT 59620-0901
Phone: 406-841-5016 • Fax: 406-841-5091
Remediation Web: www.deq.mt.gov/rem/index.asp

## The Release Autopsies for 2007 - *continued from page 1*

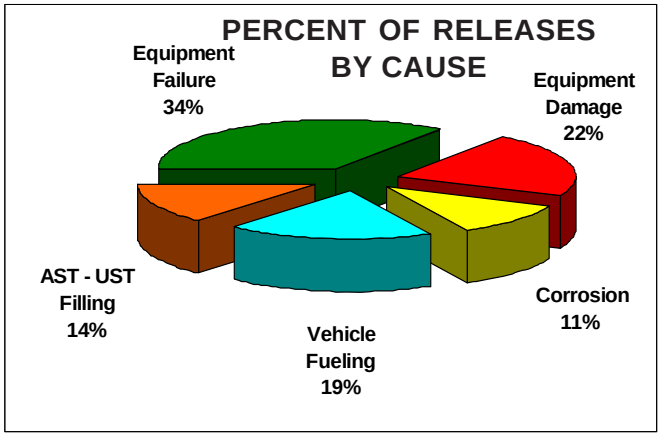
**Historic Contamination Still the Primary Source**
An analysis of the sources of the releases reveals trends similar to what we have seen in recent years. Twenty-six of the 2007 releases are from historical contamination discovered at current and former tank facilities and four releases have unknown sources. These that are mainly discovered through environmental assessment or unrelated construction activities comprise 45 percent of the total releases. Unfortunately they don't provide much information to help us prevent future releases, because most of the historical contamination originated from older tank systems that were constructed, installed, and operated much differently than the current equipment in service today.




**Piping – The Weakest Link**
Of the remaining 37 non-historic releases (or modern release that actually began in 2007), piping releases take the top source. This is a change from recent years when spills and overfills consistently took the lead. A closer look at these 14 pipe releases reveals a significant number originated from specific components such as flex connectors, unions, or solenoids. Some components wore out, some failed completely, and others loosened over time.

Equipment failure is the most prominent cause of releases, comprising over one-third of all non-historic releases. The number of releases caused by failed equipment is actually higher, because other equipment failures that contributed to releases (such as a malfunctioning shut-off nozzle) are counted as vehicle fueling spills rather than equipment failures. Piping provided a full three-quarters of failure-related releases. If you discount out-of-service tank systems, over 90% of the equipment failures from active tank systems were from piping components. Because of our small overall number of releases from active systems, this only represents 10 releases in 2007. However, it does point to piping components as the weak link in active tank systems. Some of the systems piping releases had passed previous line tests, only to be detected by a more recent line test or through other means.

**Corrosion – Minor but Contributing Factor**
Corrosion was not a very significant cause of releases, only contributing 11% of the 2007 releases. Only two corrosion releases came from operating and permitted underground tank systems, and both originated from galvanized steel pipe that was retrofitted with impressed current corrosion protection.




**Unique but Noteworthy Equipment Damage**
Damage to equipment makes up the second greatest cause of petroleum releases in 2007. The varied, and sometimes unique origins, make it difficult to eliminate or reduce these releases. Two releases originated from damage to tanks themselves; both were above-ground tanks; one blew over and the other ruptured during an explosion. Two other releases originated from damage to piping; both were actually rubber hoses attached to above-ground storage tanks; one was run over by a truck and the other was kicked by a horse. The remaining three damage-related releases came from dispensers; two happened when vehicles ran into the dispensers, and a dog caused the other one by placing a car into gear, which then pulled the hose off the dispenser.

*continued on page 3*

## The Release Autopsies for 2007 - *continued from page 2*

**Spills and Over-fills**
Spills and over-fills counted together are nearly equal to equipment failures for causing non-historic petroleum releases in 2007. Seven were caused during vehicle fueling and five were caused during the filling of the storage tank; and nearly all were due to human error. Secondary causes such as malfunctioning overflow equipment and shut-off valves significantly contributed to the amount of fuel released, but most of the releases would never had happened if people were less careless, more attentive, or just aware of their actions.

One situation that is noteworthy only because of its uniqueness involved a truck's fuel tank being ruptured by a manhole cover flipping up when the truck drove over it. DEQ debated whether to include this in our list at all, but because a tank system was involved, we did. While it is not uncommon for vehicles to damage a tank system, this is the only release we know of where a tank system damaged a vehicle.

**What Can We Do?**
Many releases, such as those from historic contamination, cannot be prevented. However this analysis of one-year's data indicates some areas where we can reduce or prevent releases in the future. As discussed above, many releases originated from piping components. Nearly all of these releases could have been limited by properly constructed secondary containment. Retrofitting existing tank systems with secondary containment and inspecting existing secondary containment can help prevent releases to the environment. Two releases occurred when old galvanized piping protected by impressed current rusted through. Owners and operators with these types of systems need to seriously consider upgrading their piping with modern corrosion resistant materials. When they make that upgrade, they should take the opportunity to install secondary containment all the way from the tank turbine sumps to the dispenser sumps. And ultimately, people need to be more careful when fueling their vehicles and filling the storage tanks. It is difficult to change people's habits from doing things the way they have always done things. But we can all start by continually talking safety with our employees and asking your personnel to politely educate customers when they see unsafe acts. ■

# Applications Encouraged for Petro Board Positions

Two positions on the Montana Petroleum Tank Release Compensation Board (PTRCB) are up for appointment by Governor Brian Schweitzer for a three-year term beginning June 30, 2008. Applications and recommendations are being accepted for these positions.

The board conducts analysis of the viability of the Petroleum Tank Compensation Fund and reports its findings biannually. The Fund was established in 1989 to provide a funding mechanism to address timely cleanup of tank releases

Board membership is unpaid and voluntary, but includes expense and travel reimbursement. You may apply or recommend someone for the Petro or other boards by going online at: **http://governor.mt.gov/boards_councils/default.asp**. You may also send a letter and CV or resume to the Governor at P. O. Box 200801, Helena, MT 59620 (fax 406-444-5529).

If you would like to visit with someone about board appointments, contact Patti Keebler, Governor's Appointments Coordinator, 406-444-3862, pkeebler@mt.gov. ■

*Theresa Blazicevich and A.J. King will complete their terms on the Petroleum Release Compensation Board June 30, 2008.*

*Thank you for your public service!*

# Meet A.J. King

It seems like only yesterday that A.J. King assumed his position as member of the Montana Petroleum Release Compensation Board representing the financial and banking industry, and now he is stepping down after one year of solid service to the state. King is finishing out the three-year term of a predecessor.

"I have been impressed with the dedication of the board," said A.J. "The board wants to do what is right and I am proud to have held a board position."

It is with mixed feelings that A.J. is stepping down. He says there is more work to do. "It has been shocking to me the number of spills that occur," said A.J. "We definitely need to curtail and prevent releases."

A.J. was born and raised in Kalispell where he lives today with his wife, Tracie, and three teenagers, Taryn, 17; Tevin, 14; and Annie, 12. A.J. is Executive Vice President of Three Rivers Bank of Montana, Kalispell. He also serves as President of the Montana Independent Bankers Association.

A.J. is a "Grizzly," having studied business and finance at the University of Montana, Missoula. He has gone by the name A.J. since birth. He will tell you that it is no nickname, even though the hospital persuaded his parents to list the name Andrew on his birth certificate. "I fought that throughout school. Everyone wanted to call me Andy. I am A.J."

A.J. does not have much free time but when he does he spends some of it fly fishing or bird hunting with his two black labs, King and Jackie. His favorite fishing river is the South Fork of the Flathead River where he learned to fly fish as a kid.

A.J.'s term expires June 30, 2008. "I have thoroughly enjoyed my time on the board and will miss it." We will miss you too A.J. and wish you the very best in your future endeavors. ■

# DEQ Enforcement Results for Fiscal Year 2006–2007

A total of 72 underground storage tank (UST) petroleum releases were confirmed in fiscal year (FY) 2006 – 2007 with 57 new cases managed by the Enforcement Division of the Montana Department of Environmental Quality (DEQ), according to the newly released DEQ report, Environmental Enforcement and Compliance FY 2006–2007. FY 2006–2007 covers the reporting period between July 1, 2005 through June 30, 2007.

During the reporting period, the Enforcement Division managed a total of 83 enforcement cases. Twenty-six of the cases were ongoing from the prior reporting period and 57 were new cases. In 64 of the 83 cases, enforcement was administrative, 17 were judicial and two cases were referred to U.S. Environmental Protection Agency (EPA). Sixty-two of the 83 cases have been closed, seven cases are under an administrative order or a judicial judgment, six cases are in litigation before the Montana Board of Environmental Review (BER) or a District Court, and eight cases were withdrawn because there were evidentiary shortcomings.

The Enforcement Division settled 48 enforcement cases during the reporting period with penalties in the amount of $85,448. The average settlement penalty was $1,780. The department collected administrative and civil penalties totaling $85,821.

As of June 30, 2007, the DEQ regulated 828 owners of 1,425 UST facilities housing 3,850 tank systems. Requiring the regulated community to remediate contaminated sites protects public health and the environment. In general, the Underground Storage Tank Program has not needed to take strong enforcement measures to achieve compliance with the corrective action requirements, due to the availability of the Petroleum Tank Release Cleanup Fund (PTRCF). ■

# Inspecting Underground Tank Inspections

Martin Holt is a thorough guy. He needs to be thorough to do oversight inspections of underground storage tanks (UST) for the Permitting and Compliance Division, Montana Department of Environmental Quality.

"I inspect the inspectors," says Holt. "We license inspectors and we make sure inspectors are looking at the compliance side of underground storage tank equipment."

An UST owner is required to check the system once a month and have a compliance inspection every three years to keep a valid Operating Permit for an UST system. For quality assurance, Holt inspects about 10 percent of the jobs completed by inspectors. All told, Holt will inspect about 50 or 60 UST systems a year.

"I don't think of myself as the inspector police, but rather the inspectors' instructor. I can help them understand the issues behind the rules, and why things matter when they don't know why."

Holt is an Environmental Science Specialist with DEQ. His background is construction, engineering and design. He knows fluids and what petroleum can do if it gets into the ground.

"Article II, Section 3 of Montana's constitution says that all persons have the right to a clean and healthful environment. My job comes out of the laws and rules that implement that constitutional right"

It took a couple of hours for Holt to inspect an 8,000 gallon diesel and a 2,000 gallon gasoline tank at Helena Sand and Gravel on Canyon Ferry Road, Lewis and Clark County. He mapped the location with a GPS devise. Before GPS, inspectors estimated latitude and longitude.

Holt meticulously checked and re-checked the test equipment, including the spill bucket and other pieces of the system. "I make sure the equipment is configured and operating correctly because it is a key indicator. If the test equipment senses the tank or piping is losing pressure it could indicate a leak. The idea is to discover leaks before they become releases and catch drips before they become spills."

This was a routine oversight inspection, an extra layer of protection. The previous inspection came out fine and so did Martin's.

"We care about leak detection and prevention. We are all about keeping fuel in the tanks and not on the ground." ■

*Martin Holt doing an inspection at Helena Sand & Gravel, East Helena, Montana.*

# DEQ Revises its Priority Ranking System for Petroleum Release Sites

In the Fall Issue 2007 MUST News, DEQ provided information on its revamped priority ranking system used by Montana Department of Environmental Quality (DEQ) petroleum programs to rank and categorize petroleum release sites. Since that time, DEQ determined that further revisions were necessary to fine tune the Priority 1 petroleum release sites.

The previous priority ranking system was explained in DEQ's draft Technical Guidance Document (TGD) #15, "Prioritization of Petroleum Release Sites." Draft TGD #15 categorized petroleum release sites into eight categories. As DEQ reviewed this ranking system, it determined that some revisions were necessary in order to better reflect the need for more immediate remedial response and investigation. DEQ is currently in the process of revising TGD #15 to incorporate the following changes.

As the chart on the following page shows, the Priority 1 sites are now divided in subcategories which are based on site-specific information and better reflects potential or known impacts to public health and the environment. It also shows previous priority ranking for all sites and where they fit in the revised ranking system

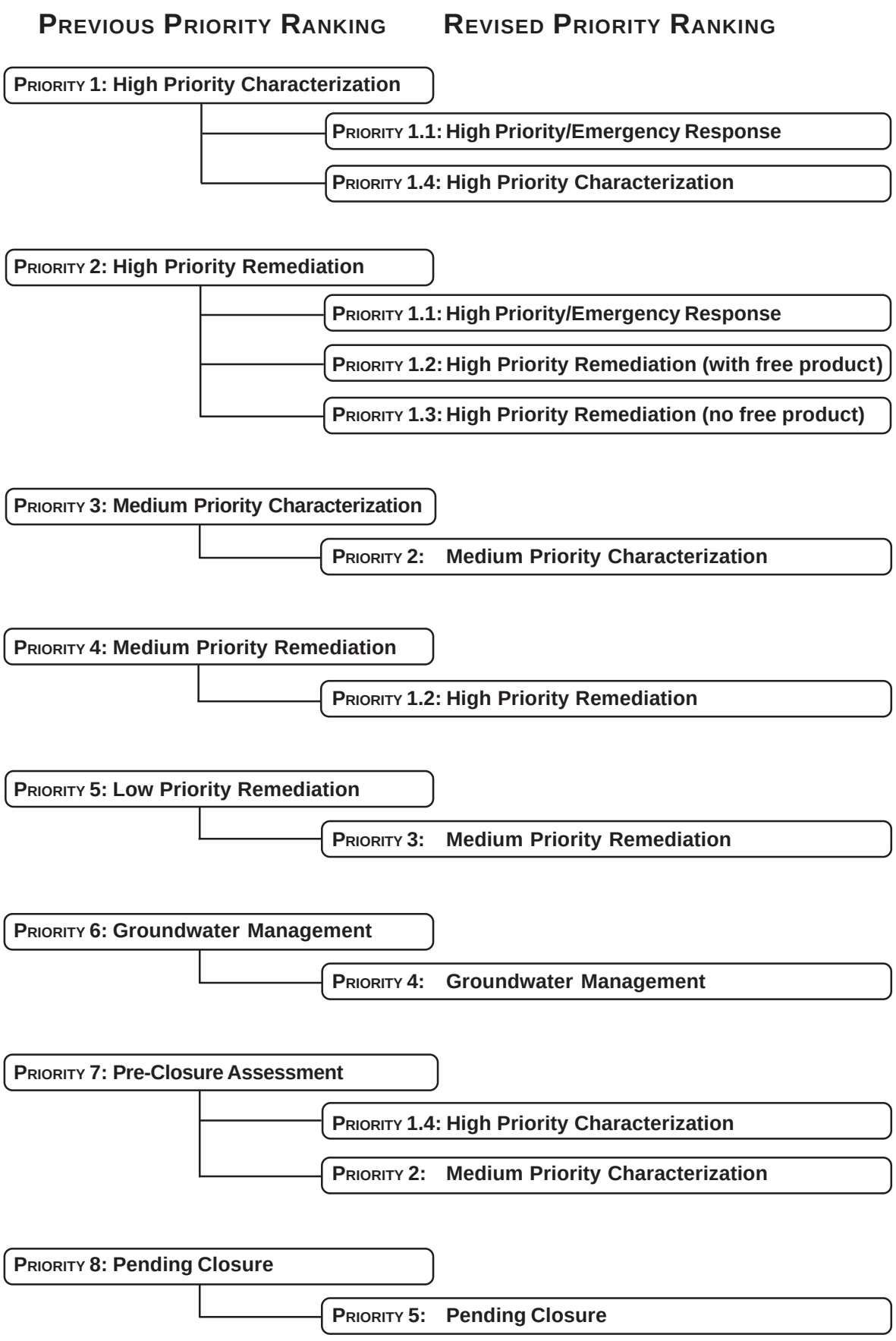
The Petroleum Tank Release Compensation Board (PTRCB) still obligates funds based on site priority. The fine tuning of the Priority 1 sites and other priority release sites allows the PTRCB to look at sites with impacts or risks to human health and obligate funds sooner to those release sites that pose a more immediate threat.

DEQ remains committed to protect human health and the environment from petroleum releases; however, there are more petroleum releases than staff and funding to address all of them. The revised priority ranking system ensures that project activities continue on the highest priority sites and maintain a watchful eye on other lower priority sites. As new information is provided, DEQ revises petroleum release site priority to reflect changing site conditions.

DEQ is currently updating the format of the leak list available at **www.deq.mt.gov/UST/USTDownloads.asp** to include the priority ranking of active petroleum release sites. ■

*continued on page 7*

## DEQ Revises its Priority Ranking System for Petroleum Release Sites *- continued from page 6*



# Consultant Advisory Meeting

Several environmental consultants with interest in Leaking Underground Storage Tanks gave input at the May 2008 consultant advisory meeting put on by the Montana Department of Environmental Quality (DEQ) Petroleum Technical and Leaking Underground Storage Tank Sections and the Petroleum Tank Release Compensation Board. Among the topics discussed were legislative proposals that the Petroleum Release Compensation Board plans to bring before the 2009 Legislative Session.

Terry Wadsworth, Board Executive Director, informed the consultants that the board plans to propose two separate bills in an effort to increase the amount of funding available in the shrinking petroleum fund.

One proposal addresses co-pays made by underground and other petroleum storage tank owner-operators (O/Os). The bill would increase the co-pay that O/Os pay for cleanup under the petroleum fund from 50 percent of the first $35,000, or $17,500, to 50 percent of the first $50,000, or $25,000, plus five percent of the remaining cost. The cost cap for cleanup funds will remain at $1 million for permitted Underground Storage Tanks and for inspected above ground tanks. Another proposal to help increase the amount of funding available is the proposed removal of administrative costs from fund expenses.

The Petroleum Board also proposes that the co-pay for owners of heating oil tanks, which are primarily residential customers, increase from 50 percent of $10,000 to 50 percent of the first $50,000, plus five percent of the remaining cost. The cost cap is currently $500,000 and is being proposed to be reduced to $250,000 since less than 1 percent of the cleanup for heating oil tank release exceeds $250,000. However, the cost cap could increase to $1 million if the owner secures compliance with inspection procedures.

Fees collected from heating oil tanks only make a small annual contribution to the fund and there has been discussion about removing them from the fund. "The board does not want to remove heating oil tank releases from the fund, but we are forced to look at limiting their liability on the fund," says Wadsworth. The board is looking to insurance as a mechanism to bridge the gap created by the proposed legislation.

The second bill is proposing a request for a ¼ cent gasoline fee increase from ¾ cent to 1 cent per gallon. Money to sustain the Petroleum Fund comes from the gasoline fee collected on petroleum fuels.

The Remediation Division of DEQ is planning to ask the legislature to appropriate $50,000 per year over the next biennium to conduct a pilot program in two communities to consolidate and streamline monitoring of release sites that have implemented a remedy.

The Petro Board also wants to increase the fund ceiling to $10 million from $7 million, and the floor from $4 million to $6 million. "The fund was put in place in 1989," says Wadsworth. "The dollars went a lot further then than now."

A policy change is also in the works which would raise the minimum claim threshold from $200 to $1,000.

The consultant advisory meeting takes place two or three times a year and is open to the public. If you wish to be made aware of the consultant advisory meetings, subscribe to our email list for interested consultants by following the links on the board's web site: **http://deq.mt.gov/pet/index.asp.** ■

# Operator Training Update

The UST Section continues to conceptualize Operator Training with input from owners and operators. You may recall that a Class A Operator is probably the owner or regional manager; the Class B Operator is the person who conducts the routine operation, maintenance, and recordkeeping on site; and the Class C Operator is the person on site who would need to respond to an emergency. A person may be in more than one operator class.

Much can still change if stakeholders want something different, but here is where the program is headed generally:

- Rules to implement Operator training will be in place by August 8, 2009. We intend to start writing them this August 2008. We welcome input until then.

- Owners would identify Class A and B Operators to the department by February 2010. The goal is to train those Operators by August 8, 2012. We may stagger the training due dates so as not to have a last minute rush.

- We may rebuild TankHelper into a video-driven training with a test for both Class A and Class B Operators. Operators would need high speed internet access to complete these versions of training.

- We may allow Class B Operators to complete EPA's Environmental Response Program Workbook to satisfy training requirements.

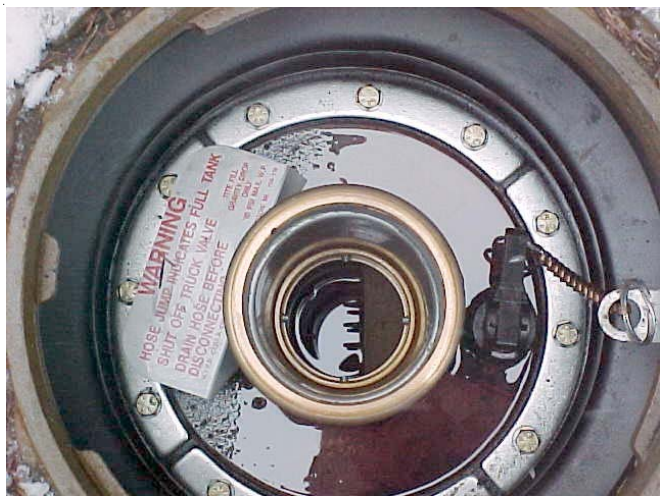
- We will provide a mechanism by which the UST Program certifies trainers, their specific trainings and their evaluations. These trainers could conduct one-on-one training and classes for Class A and Class B Operators.

- Class A Operators, Class B Operators and certified trainers would all be able to train Class C Operators in emergency response practices. Owners or operators would need to maintain documentation of that training on site.

We are still inviting input. Please contact Bill Rule, UST Program Manager at (406) 444-0493 or brule@mt.gov if you have input or questions. ■

*Photos taken during an inspector training...*

*vapor well marking*




*spill bucket with fluid*

# TankHelper A Finalist for National Award

The online TankHelper program of the Montana Department of Environmental Quality (DEQ) has been selected as a finalist for another national award, the 2008 Intergovernmental Solutions Awards, sponsored by the American Council for Technology (ACT). DEQ Underground Storage Tank Section Supervisor, Bill Rule, was notified in April that TankHelper was one of four agencies in the state and local category. "It is quite an honor to even be a finalist," says Rule.

A committee of government and industry IT professionals chose finalists who demonstrate how adopting best practices from government and industry leads to measurable improvements in the efficiency and effectiveness of government programs.

ACT is a non-profit educational organization founded in 1979 to assist government in serving the public through the effective and efficient acquisition of information technology (IT) resources. ACT provides education, programming, and networking opportunities to enhance and advance the government IT profession.

TankHelper also received a national Best of the Web award for eGovernment excellence in 2007. Plus, TankHelper was a 2007 recipient of the State of Montana Information Technology Project Excellence Awards in the category of Innovation and Creativity. The UST Program is conceptualizing a second version of TankHelper that will comply with EPA's Operator Training Guidelines in response to the Energy Policy Act of 2005. ■


Montana TankHelper

**Online Underground**
**Storage Tank Operator Training is Free & Easy!**

Simply log on to TankHelper, identify your facility and proceed through the service. When you finish, you can print out a plan that will help you manage your underground storage tanks.

Training for petroleum system operators to:
- Learn about your petroleum equipment
- Understand rules and responsibilities for your facility
- Get best management practices
- Simplify complex regulations
- Create a site-specific management plan

tankhelper.mt.gov

# jUST Jargon

An Automatic Tank Gauge (or ATG) consists of a probe installed inside an underground storage tank (UST) and a console connected to the probe by wires. The console processes and communicates information from the probe. ATGs by themselves can detect leaks, track deliveries and inventory, fuel volume, ullage, water levels and more.

With additional equipment an ATG can sense piping leaks, activate overfill alarms, call alarms to off site phone numbers, interact with point-of-sale software and much more.

Make friends with your ATG. Be aware that it won't do leak detection for you; you have to interact with it at least monthly. Daily is that much better. Don't think of it as an alarm; its primary purpose is to conduct leak tests. You need to review and document these tests.

If a leak alarm sounds, don't just shut it off. Check your system for leaks and call the LEAK hotline at 1-800-457-0568 if you can't determine the cause, or if the cause is product escaping to the environment or the secondary containment.


## LEAK HOTLINE 1-800-457-0568

Acknowledgements to those involved in the production of the *MUST News:*

Editorial and Writing:
John Arrigo
Mary Ann Dunwell
Dan Kenney
Jeff Kuhn
Sandi Olsen
Bill Rule
Mike Trombetta
Terry Wadsworth

Production Design:
JoAnn Finn

Web Production:
Kathy Gessaman

Distribution:
Lisa Tucker